

REMARKS

The specification has been amended. Support for these amendments may be found in Figures 2-4. These drawings clearly show that the heating chamber has a bottom and a peripheral wall. Further support for the amendments can be found in the specification at page 3, lines 3-5; page 7, lines 23-26; and page 8, line 28 to page 9, line 5. Claims 17-36 have been allowed. Claim 1 has been amended. New claim 37 has been added. Thus, claims 1-37 are pending in the application. Support for the amendment to claim 1 may be found in Figures 2-4, and in the specification at page 3, lines 3-5; page 7, lines 23-26; and page 8, line 28 to page 9, line 5. Support for new claim 37 may be found at page 3, lines 3-5; page 7, lines 23-26 and at page 8, lines 28-29. Thus, no new matter has been added and entry of these amendments is respectfully requested.

Rejections under 35 U.S.C. 103(a)

Claims 1-16 were rejected as being unpatentable over Smith (US 2,589,301). The Examiner alleges that Smith discloses the invention essentially as claimed. However, Smith neither discloses nor suggests the invention as presently claimed.

Claim 1 as amended recites that the heating element is mounted within the heating chamber above the bottom and below the level of the outlet. In contrast, the heating element 17 of Smith is embedded within the block 15, in the bottom portion of the heating chamber. As shown in the drawings of Smith, the heating element is at the same level as the outlet spout 8. In Smith, the outlet is placed "immediately above the floor of the furnace." Smith at Column 4, lines 9-10. Thus, the volume of liquid metal in the furnace of Smith is kept relatively low. In contrast, because the outlet is above the level of the heating element in the present invention, the heating element of the present invention remains submerged within the liquid metal in the heating chamber. Nothing in the Smith reference suggests moving the outlet above the heating element, as presently claimed, since this would leave additional molten metal in the chamber for no benefit. However, in the presently claimed invention, the outlet is located above the heating element so that the heating element remains submerged in the liquid metal, thereby both heating the liquid metal and protecting the heating element from oxidation.

In view of the foregoing, the Smith reference simply does not suggest the invention as presently claimed. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

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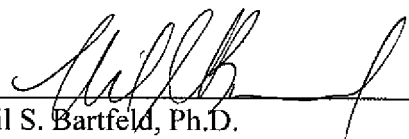
CONCLUSION

Applicants submit that all claims are in condition for allowance. However, if minor matters remain, the Examiner is invited to contact the undersigned at the telephone number provided below..

Respectfully submitted,

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